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NASA Policy Directive

NPD 8074.1Effective Date: August 11,
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2014**COMPLIANCE IS MANDATORY**[Printable Format \(PDF\)](#)

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(NASA Only)

Subject: Management and Utilization of NASA's Space Communication and Navigation Infrastructure

Responsible Office: Office of Program Analysis and Evaluation

1. POLICY

It is NASA's policy to maintain a single process for the development and utilization of Agency space communications and navigation (C&N) infrastructure and for the enhancement of this infrastructure to enable new capabilities for the future. C&N infrastructure includes the following:

- a. The ground and space-based facilities and assets of what are presently known as the Near Earth Network (NEN), the Deep Space Network (DSN), and the Space Network (SN).
- b. Communications networks around all heavenly bodies beyond Earth, including the Moon, Mars, or other planets, providing support to surface as well as orbital user missions.

2. APPLICABILITY

This NPD is applicable to NASA Headquarters, NASA Centers, and JPL, including Component Facilities.

3. AUTHORITY

15 U.S.C. 272(b), Section 13, "Standards Conformity" of "National Technology Transfer and Advancement Act of 1995."

4. REFERENCES

- a. NPD 1000.0, NASA Governance and Strategic Management Handbook.

- b. NPD 1000.3, The NASA Organization.
- c. NPD 8070.6, Technical Standards.
- d. OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards.
- e. NPR 2570.5D NASA Radio Frequency (RF) Spectrum Management Manual.

5. RESPONSIBILITY

- a. NASA's Space Operations Mission Directorate shall manage the space C&N infrastructure through the Space Communications and Navigation (SCaN) Program Office, as prescribed by NPD 1000.0A, NASA Governance and Strategic Management Handbook, and NPD 1000.3, The NASA Organization.
- b. The SCaN Program Office shall:
 - 1) Be the Agency's central authority for designing, developing, and implementing a single unified process for the Agency's space C&N infrastructure.
 - (2) Work with the Mission Directorates to identify future C&N requirements and resolve capability gaps.
 - (3) Develop the space C&N capabilities in anticipation of future requirements.
 - (4) Coordinate all technical standards used to implement C&N infrastructure with the Office of the Chief Engineer for adoption as NASA Technical Standards and inclusion in the overall set of NASA Standards, as prescribed by NPD 8070.6, Technical Standards, and OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards.
 - (5) Provide the Agency Program Management Council (PMC) with an annual assessment of integrated, mission-based capability gaps and an update of new C&N technologies.
 - (6) Develop the architecture and standards necessary to enable the Agency's C&N infrastructure to be interoperable with those of other agencies and international partners.
- c. NASA Mission Directorates (MD) shall:
 - (1) In general, use SCaN networks to meet their communication and navigation requirements for human and robotic space missions. However, where appropriate and cost-effective for the Agency, MDs, in coordination with the SCaN Program Office, may use pre-existing infrastructure external to NASA for this purpose, as long as no new facilities are constructed using NASA funds.
 - (2) Not design or develop space C&N infrastructures, to include the surface of the Moon, Mars, or other planets, independent of the SCaN Program.
 - (3) Work with the SCaN Program Office to identify and resolve capability gaps.
 - (4) In consultation with SCaN, develop space C&N technologies relevant to their operating platforms that are compatible and interoperable with SCaN infrastructure.
- d. NASA's Office of the Chief Engineer shall:

(1) Provide oversight of the process by which capability gaps can be identified and present to the PMC if needed.

(2) In consultation with SCaN, create and maintain a set of NASA Standards that include those selected for implementation within NASA's space C&N infrastructure and specify mechanisms by which their use by NASA space flight programs/missions will be required.

6. DELEGATION OF AUTHORITY

None.

7. MEASUREMENTS/VERIFICATION

None.

8. CANCELLATION

None.

/s/ Charles F. Bolden, Jr.,
Administrator

ATTACHMENT A: (TEXT)

(URL for Graphic)

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